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Quality Infrastructure for Sustainable Development

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THE OIML BULLETIN IS THE QUARTERLY JOURNAL OF THE ORGANISATION INTERNATIONALE DE MÉTROLOGIE LÉGALE

The Organisation Internationale de Métrologie Légale (OIML), established 12 October 1955, is an inter-governmental organization whose principal aim is to harmonize the regulations and metrological controls applied by the national metrology services of its Members.

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Editorial

ANTHONY DONNELLAN
BIML DIRECTOR

Looking back on six months to plan ahead

This edition of the Bulletin goes to press just a short time after the BIML published the Working Document and Addenda for the 54th CIML Meeting to be held in Bratislava this October. In writing my report for the CIML, I and my Team at the BIML listed the actions we have accomplished in just over six months since I took over as BIML Director in January.

Firstly, I wish to thank the BIML Personnel for helping me to settle down in Paris and take up my responsibilities. I also wish to acknowledge the support I have received from the CIML President, the CIML first and second Vice-Presidents, Presidential Council members, CIML Members and Corresponding Member Representatives.

I am fortunate in that I am joining the OIML at a pivotal time in its long and esteemed history. While we continue to enhance the development of Recommendations and other international publications, through Task Group 2023 and other strategic planning initiatives, ideas and reforms have been generated to improve the planning, action and coordination of our legal metrology activities that go beyond the development of publications:

- Building on past success, direct consideration has been given to how the OIML Certification System can reduce technical barriers to trade and the need for expensive testing facilities.
- Work also continues on the revision of OIML D 1 *Considerations for a Law on Metrology*. This is a critical publication for the future relevance and impact of legal metrology.
- In Bratislava, we will be convening a workshop on e-Learning. The objective is to learn from expert practitioners and to understand what your needs and expectations are, what is feasible and achievable, and how we can deliver.

In reviewing our work over the last six months, we listed a large number of key accomplishments – these are given in detail in CIML Working Document Addendum 4.1 and include:

- prioritisation and refocus of our publication development work to provide enhanced levels of support to TCs, SCs and PGs;
- refining of our IT strategy with an increased focus on the long-term needs of the Organisation;
- continued support of CEEMS priorities and projects;
- further steps to transition to a digital strategy;
- exploration of ways to elevate the importance of legal metrology internationally;
- continued translation of publications into French;
- continued deepening of our relationship with Organisations in Liaison and partner organisations;
- persistent and careful stakeholder targeting initiatives for World Metrology Day, resulting in a record penetration rate this year;
- identification of prospective new OIML Member States and Corresponding Members;
- implementation of initiatives in the BIML to ensure financial sustainability; and
- ensuring the better alignment of objectives and shared understanding with Regional Legal Metrology Organisations (RLMOs).

I look forward to seeing you in Bratislava in October 2019 and to discussing our actions, policies and projects with you so that together we can look towards an exciting future. ■

PREPACKAGING

A critical review of Indian Packaged Commodities Rules 2011

Gopishetty Srikkanth, India

1 Introduction

The history of standard weights and measures can be traced back to the early Indus valley civilization. Traders used measures in their business either to count the number of precious metals or to measure the quantity of product.

During the Maurya period in the 4th century, a complex weights and measurement system was adopted[1]. Over the centuries, weights and measures have been improved and accuracy has been increased. References to weights and measures are found in Kautilyas Arthasahtra as *Danusha & Angulas* which were largely used to measure distance.

Weights and measures are necessary for every individual and for society in a business, and forms part of every transaction that takes place in business and commercial contracts. In the absence of weights and measures, variations will exist and the buyer and the seller may not be paid the right amount for their good or services. The evolution of weights and measures did not happen in a year or two, but took centuries to reach the current stage. Prior to 1976 there was no central Indian law enforcing the units and standards of weights and measures and every State Government had its own system of measurements.

The common units are being adapted and implemented across India under the metric system, and every unit of weight or measure shall be in accordance with the metric system based on the International System of units[2]. All transactions or contracts involving any goods shall be made using these weights, measures or number as may be prescribed under the Act.

The law relating to weights and measures was modified twice in three decades. The Standards Weights and Measures Act 1976 and the Packaged Commodities Rules 1977 were legislated and then in 2009, the Legal Metrology Act ("LMA") 2009 and the Packaged Commodities Rules 2011 came into force.

This Act is a piece of procedural law which enforces standards of weights and measures and regulates the trade and commerce of weights and other goods sold and distributed by weight and measure or numbers[3]. The main objective of the law is to ensure the correct price and the correct quantity of the products, enabling the customer to make an informed decision based on the information available on the packaging of the products. The Act defines "weight or measure" as a weight or measure specified by or under the Act and includes a weighing or measuring instrument[4]. The Act strictly prohibits any advertisement, announcement, and exhibit, invoice and document other than the standard units of weight, measure and number.

In the past various practices, as per custom usage, were adopted by society for measuring products such as rice, weights, precious metals such as gold and silver, and other goods, but after the implementation of the law all customs, usage and practices or methods became void and only the weights and measures as per the Act were to be followed. Administrative machinery was developed at various levels to exercise powers and discharge the duties conferred under the Act. The Act also empowers officers to inspect and seize the product if they believe that any violations of the Act or rules have been committed.

2 The Legal Metrology (Packaged Commodities) Rules 2011

In order to achieve the objectives of and gain benefits from the Act, The Legal Metrology (Packaged Commodities) Rules 2011 are limited. These rules apply only to prepackaged goods.

A prepackaged product means a product which, without the purchaser being present, is placed in a package of whatever nature, whether sealed or not, so that the product contained therein has a pre-determined quantity[5].

The objective of the rules is to provide the buyer or consumer with information concerning the product and to avoid misleading information on the packages.

[1] Allchin, F.R. (1995), "The Mauryan State and Empire", *The Archaeology of Early Historic South Asia: The Emergence of Cities and States*, Cambridge University Press

[2] Section 4, The Legal Metrology Act 2009 (No. 1 of 2010)

[3] The Legal Metrology Act 2009 (No. 1 of 2010)

[4] Section 2(w), The Legal Metrology Act 2009 (No. 1 of 2010)

[5] Section 2(l), The legal Metrology Act 2009 (No. 1 of 2010)

The rules are limited specifically to prepackaged goods for retail and wholesale trade. These rules also stipulate that certain products (mentioned in Second Schedule of the Rules) such as baby foods, biscuits, breads, cereals, tea, oil, etc., are to be sold only in standardised size packages.

Previously, it was allowed to pack a non-standard size by making a disclaimer declaration such as "*Not a standard pack size under prepackaged goods rules*", but this is no longer allowed. The objective of this rule is to protect the consumer against a reduction of the net weight of the product in the event of an increase in the price (MRP). It was noticed by the authorities that if the price of the product increased, then certain manufacturers maintained the same price (MRP) but reduced the quantity in order to avoid the consumer realising that there had been a price change. Accordingly, certain basic products mentioned in the Second Schedule shall conform to the standard pack size so that the consumer can make an informed decision in the event of any price increase.

As per rule 6, a prepackaged commodity offered for sale or distribution shall have a label which shall be securely affixed with the following declarations as required under the rules:

(a) name and address of the manufacturer,
(b) name of the product (a generic name can be mentioned),
(c) net quantity,
(d) date of packing / manufacture,
(e) maximum retail sale price (MRP) with all taxes included,
(f) size of the contents,
(g) name, address, telephone number, e-mail address (if available) of the person who can be contacted in the event of a consumer complaint.

The law prescribes certain mandatory requirements during the time of sale, display and advertisement, so that the consumer cannot be misled by any unfair trade practices either on price or quantity. It is not permitted to affix individual stickers for declaring individual information. However, in the event of a reduction in the MRP, it may be allowed to affix a label for the lower price and the higher MRP shall be struck off visibly [x], so that the consumer is aware that the price has been reduced.

Due to recent changes in GST slabs, many traders have faced this problem. The product may have been manufactured some time previously and the MRP may have been fixed considering the GST slab rate. During 2018, hundreds of the products were brought under lower GST slabs and the benefit had to be passed on to the customer. But these products had already reached the stores and so traders were unable to make changes to the packages, but most traders passed the benefit on to the consumers.

Now the issue is when these packages have to comply with these regulations and whether stocks at the place of manufacture have to comply with rule 6. The products shall comply with rule 6 when they leave the manufacturing facility or factory. Rule 6 of the PCRO 2011 is the major operational clause of these rules, which largely specifies the way the package shall appear.

Readers may have noticed that shampoo or biscuit/chocolate product advertisements on electronic or print media show the price and the quantity. Any advertisement that mentions the retail sale price of any pre-packaged commodity shall contain a declaration as to the net quantity or number of the commodity contained in the package[6]. The weight of the package shall be declared in SI units. If the quantity is less than one kilogram then it shall be declared in grams. Similarly, the length of a product shall be declared in metres and it shall be declared in centimetres if the size is less than one metre.

In the United Kingdom, the Weights and Measures Act 1985 and the Weights and Measures (Packaged Goods) Regulations 2006 govern prepackaged product requirements. However, it is interesting to note that displaying the retail price is not mandatory on the package at the time of manufacturing; it is the duty of the retailers to display the price of goods. In India as per the Packaged Commodities Rules 2011, it is mandatory to declare the MRP ("retail sale price" means the maximum price at which the product may be sold to the consumer). This is one of the quite contrasting provisions, from PCRO rules 2011, where retailers are entitled to fix their RRP (recommended retail price) and final sale price. The reasons may be that in a country such as India, where predominately 50 % of the population resides in rural areas and has no access to pricing and other details pertaining to the product, in order to safeguard the consumer the MRP regime may have been implemented.

So how are these declarations as per Rule 6 to be made on the prepackaged product? The rules provide the method and manner in which the mandatory declaration is to be made. Every package shall contain a label securely affixed to the package, visible to the consumer. The information has to be grouped together in one place or the pre-printed information could be grouped together and given in one place and online information grouped together in another place; this area is called the "principal display panel".[7]

[6] Rule 31 (1), The Legal Metrology (Packaged Commodities) Rules 2011

[7] Rule 2(h), The Legal Metrology (Packaged Commodities) Rules 2011

The entire declaration to be made on the package can be made on the "label" and must be securely affixed. Before we discuss the label, it is pertinent to note the definition of "packaging". Philip Kotler defines packaging as "all the activities of designing and producing the container for a product".[8] Packaging helps protect the product from damage during transportation, storage and sale. Normally, the manufacturer chooses pre-printed packages of containers, wrappers, bottles and plastic films, in view of the cost of manufacture and storage of such packages. All the static information such as the manufacturer and consumer care address are pre-printed and dynamic information such as the MRP and the date of manufacture, etc., are printed at the time of the packing. In some cases, the dynamic information is securely affixed along with other information such as the name of the product, the net weight and the MRP. However, most legal metrology inspectors are not in agreement with the affixing of an additional label on the package in view of Rule 6(3) which states that it shall not be permissible to affix individual stickers on the package which alter the declarations required under these rules.

It is evident that rule 4 provides a way to affix the label. It states that prepacked products shall bear a securely fixed label. Rule 6(3) prohibits affixing individual stickers. Before going into the details, it is necessary to look at the definition of "label". According to Black's dictionary, the word label means "Anything appended to a larger writing, as a codicil; a narrow slip of paper or parchment affixed to a deed or writ, in order to hold the appending seal"[9].

Accordingly, the declaration can be printed on a "label" which can be securely affixed on the package. What does rule 6(3) prohibit? It only states that individual stickers are not permissible, meaning that only one sticker along with the complete information can be securely affixed. Now the issue is whether, when the company name and the customer care cell address are already pre-printed, the manufacturer is entitled to affix another label which contains content information as may be required under the rules. Then the answer should be "yes", but the authorities interpret it in a different way and hundreds of cases are filed before the magistrates for affixing a single label declaring the dynamic information, while the rest of the information, which is static, is already printed on the packaging.

The definition of "pre-packaged" is that the product is packed in the absence of the customer, who is not privy to the nature of the product, quantity and other details, but as per the enforcement authorities, the definition is extended even in the case of products that are displayed for browsing and inspection by customers. For example, shoes, trousers and electronic goods that customers may look at, feel and then buy are also required to comply with the declaration. One can understand that these products, if they are sold on e-commerce websites, are required to have all the necessary declarations as if they were prepackaged commodities, even though consumers do not have the opportunity to look at them and feel them in the same way as they can for products displayed in stores, which they only purchase once they are fully satisfied. This issue was raised in the case of Reebok India vs. The Union of India (UOI)[10].

Another interesting question was raised before the Honourable Supreme Court of India, in Civil Appeal 1117 of 2010 in respect of sunglasses and shoes, concerning whether these are packaged products as per the Act when they are displayed in a polythene bag for viewing and browsing by customers. The State of Maharashtra, Legal Metrology department filed a case for non-compliance of PCRO rules by the firm Liberty Optics, who operates a counter at Globus Stores, Bandra, Mumbai. The allegation of the department was that the seller displayed five pairs of sunglasses in a polythene bag but that it has no declaration as required under the Act. The trader contended that the sunglasses were not directly purchased by the customers, and that they are only purchased after inspection and testing and also after choosing the size, design, colour and other aesthetics of the product after satisfying their suitability. Hence the sunglasses did not fall under the definition of a prepackaged product, as the package did not have any predetermined value or quantity. However, the matter is still pending before the Honourable Supreme Court for final hearing of the parties[11].

3 Exemptions in respect of certain prepackages

All packaged products fall under the scope of PCRO regulations; however, these rules shall not apply to certain products:

(a) when the content of the package is below 10 g or 10 ml the net quantity and MRP shall not be declared;

[8] Philip Kolter, "Marketing Management," Publisher Pearson Custom Publishing, Copyright 2001 by Prentice-Hall Inc., Millennium Edition, July, 1999, pp. 314-315

[9] https://thelawdictionary.org/label/

[10] MANU/KA/0053/2009 (31.01.2009 - KARHC)

[11] MANU/SC/0990/2011 (State of Maharashtra & others Vs Subhash Arjundas Kataria (26/08/2011)

(b) food packages delivered by hotels and restaurants that are meant for immediate consumption;
(c) agricultural products packages whose net weight is more than 50 kg;
(d) formulations and non-scheduled formulations covered under the Drugs (price control) Order 1995.

The Act and the rules are to be simplified in respect of prepackaged fresh fruits and vegetables which are allowed to be viewed, inspected and checked by the customers when buying. As per the rules, even when a product is wrapped with any kind of paper or plastic cover, it shall be termed a prepackaged product and is required to comply with the provisions of the Act. Considering this, many traders and supermarkets in general display fresh fruit and vegetables in open containers, but as they are perishable these products will not survive for long. If the rules are slightly modified so that wrapping that does not fully cover fruits and vegetables is exempt from the definition of fruit and vegetables, then this can eliminate loss due to damage and destruction of fruit and vegetables, as their shelf life will be extended.

4 Packaging and labelling regulations under the Food Safety and Standards Act 2006

Under the Food Safety and Standards (Packaging and Labelling Regulations), a manufacturer or packer has to make a much more detailed declaration than under the Package Commodities Rules. This includes the entire declaration to be made under the Package Commodities Rules and also an additional declaration such as a list of ingredients, types of oil used, nutritional information, health claims (if any made by the manufacturer or packer), vegetarian or non-vegetarian logo, details of permitted colours, batch number, best before date, restrictions if any, specific declaration if food is not suitable for particular age or group, etc.

There are exemptions from the 2006 Act. Where the surface area of the prepackage is less than 100 cm^2, the label of such a package shall be exempt from the requirements for the list of ingredients, lot number or batch number or code number, nutritional information and instructions for use, but this information shall be given on wholesale packages or multi-piece packages, as the case may be.

The Food Safety Standards (Packaging and Labelling) Regulations 2011 and the PCRO 2011 rules both prescribe mandatory labelling declarations, but the FSS Labelling Regulations 2011 is more detailed with regards to the composition of the products and their ingredients, nutritional values, allergenic information, etc. Moreover, the FSS Labelling Regulations 2011 has overriding power in the prepackaging and labelling regulations of food products.

5 Offences by companies

If any offence is committed under the Act by a company, then the company director nominated under the Act can be deemed guilty of the offence and he is liable to prosecution and punishment accordingly. The Act provides scope for nomination of one director who is responsible for taking the necessary steps to prevent any offence being committed that is in violation of the Act. The company has to file the necessary nomination form as prescribed under schedule XIII before the Director of Legal Metrology or the State Controller in whose jurisdiction the company is based. If no nomination is filed before the authorities, then all the board directors shall be liable for any violations or offences committed by the company.

No case will be brought against the director(s) if they are able to prove that the offence committed under the Act was committed without their knowledge and that they took the necessary steps and actions to prevent the offence, which was committed despite such measures being taken.

The penalties under the Act vary from a monetary fine of up to Rs. 50 000 per person for a first offence; for a second and subsequent offences the penalty includes a fine and imprisonment of up to three years. All first offences are compoundable and the compounding fee may vary from state to state. Second and subsequent offences are not compoundable.

In the case of Pepsico India Holding vs the Food Inspector and another, the Honourable Supreme Court upheld that the Complainant has to specifically indicate in the complaint that the directors accused in the case are responsible for conducting the affairs of the company. A simple statement that accuses a company director is insufficient to prosecute for any violation under the Act[12].

6 Conclusion

Offences committed under the Act are tried as criminal offences. Unless the persons (including the director) are

[12] Criminal Appeal no. 836 of 2010; Supreme Court of India

personally involved in committing the offence, elements of the criminal offence such as *mens rea*, *actus reus*, and *causation* are absent here.

For instance if a company operating various manufacturing facilities across India produces hundreds of thousands of units every day, then is it practically impossible for the director to personally oversee compliance with the Act at each unit level. Under criminal jurisprudence, prosecution requires much more proof beyond any reasonable doubt. For instance in the case of any non-declaration of statutory information such as consumer care details, or date of packing or MRP, then it would be an offence under the Act and the director(s) would be liable to prosecution. This applies even if the complaint is taken in its entirety at face value, even if there is no direct relationship with the director and the offence is committed at a distant manufacturing facility, store or distribution centre, or even if these declarations are smudged or wiped off during the transportation or while in storage.

Hence, it is clear that the directors are only liable for any violation when they are personally responsible for the non-compliance. Should the office of the director be made responsible for these violations? Maybe those who drafted the legislation took the view that if the directors are made responsible, only then might the directors apply the measures more stringently and carefully. It is well established under the law that vicarious liability is unknown to criminal law. In its 47th report, the Law Commission proposed that if the offence is punishable by a term of imprisonment only and if the offender is a corporation, then the court shall have the competence to sentence the offender to only a fine.

The nomination clause under section 49 of the Legal Metrology Act (LMA) 2009 and the nomination clause under the Food Safety & Standards Act (FSSA) 2006 differ substantially. Under Section 66 of the FSSA 2006, where a company has different establishments or different units then the company can nominate a head or a person-in-charge of the unit as a nominee who shall be responsible for taking the necessary measures to prevent any offence under the FSS Act 2006.

Under the FSSA 2009, the nominee is not required to be the director of the company, unlike under the LMA 2009. Any person who is in charge of the unit can be nominated. Especially when a business has a large geographical presence it is impossible for the director to verify compliance with the LMA 2009. All he or she can do is to implement a policy or programme whereby the respective branches adapt and ensure compliance.

The FSSA 2006 is a more stringent Act compared to the LMA 2009, considering that the products and the food products involved are consumed directly. The FSSA 2006 empowers the person who is in charge or the head of the unit as the person responsible for ensuring compliance and he or she can be nominated under the food law.

In the same way, the LMA 2009 may also need to allow a similar provision in which the person who is responsible for the day to day affairs of the unit or branch can be a nominee instead of the director. Accordingly, the Act requires an amendment to include a similar mirror clause for the nomination as that contained in the FSSA 2006. ■

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WORLD METROLOGY DAY

World Metrology Day 2019 in P.R. China

GUO Su, Secondee, BIML

The theme for this year's World Metrology Day is *The International System of Units - Fundamentally better*. According to Resolution 1 passed by the 26th International Metrology Conference (CGPM), the definitions of four SI basic units (the kilogram, ampere, kelvin and mole) have been redefined and are now based on constants of nature. The new definitions became effective on 20 May 2019. The date of 20 May was chosen as it is World Metrology Day, which commemorates the anniversary of the signing of the Metre Convention in 1875.

Three key events were held in China to celebrate World Metrology Day 2019. They were attended by the BIML Director Mr Anthony Donnellan; accounts of these events are given below.

First Event: *Ceremony of World Metrology Day*

On 20 May 2019, Mr. Donnellan and 500 Chinese and overseas guests including academicians and experts from the metrology field, gathered together at the China Hall of Science and Technology in Beijing to participate in a ceremony to celebrate World Metrology Day. This event was jointly organised by the State Administration for Market Regulation (SAMR), China, and the National Institute of Metrology (NIM), China, as well as other associates.

In his address, Mr. Donnellan highlighted the current key areas of the work of the OIML and the future focus of the organization. He especially thanked China for its active role in the international metrology community.

Mr. Qin Yizhi, Vice minister of SAMR (also CIML Member for China) announced that the new definitions of the basic SI units were officially implemented in China on 20 May 2019. The China National Scientific Terminology Examination and Approval Committee simultaneously released new definitions of the seven basic SI units in Chinese.

Mr. Donnellan presented key areas of OIML work

During the event, an exhibition of outstanding works of the National Science and Technology Innovation Creative Materials Collection Campaign was held, together with the prize ceremony for the winners of the 2018 China Metrology and Testing Society Science and Technology Progress Awards.

Second Event: *Metrology Exhibition*

The second event was the International Measurement and Testing Technology and Equipment Expo (referred to as CMTE China) which was held on 21 May 2019 in the Shanghai Convention & Exhibition Center of International Sourcing.

During this major event Mr. Donnellan delivered a key speech which included topics on strengthening international mutual measurement cooperation and accelerating the realisation of unified standards and global communication. In addition, he met with experts from countries such as Cambodia, Thailand and China to discuss the status of international measurement cooperation and opportunities for future development.

The International Metrology Exhibition, which lasted three days, covered a total area of nearly 8 000 m^2. The scope of the exhibits covered metrological verification and calibration test technology and standard equipment, physical and chemical analysis instruments, reference materials, flow meters, pressure meters, temperature meters, medical analysis and instruments, electromagnetic compatibility and environmental testing, energy meters, water meters, gas

and heat meters, tankers, scales, industrial automation control instruments, performance test equipment, surveying instruments, radio instruments and others. The exhibition also included product demonstrations, technical exchanges and trade talks, as well as promoting the active participation of the measurement community, in order to achieve success.

The exhibition attracted hundreds of exhibitors from all over the world. There was also a major international forum, which was attended by hundreds of domestic and overseas guests who conducted in-depth discussions on topics such as measurement and energy, and who engaged in exchanges with national commercial aircraft measurement and testing technology manufacturers. The response was enthusiastic, with the total number of visitors exceeding 15 000. In addition, in order to enhance the promotion of the exhibition, the organisers also used a live webcast and video broadcast platform, which was viewed up to 60 000 times.

Third Event: *Ceremony of World Metrology Day in Shanghai*

Mr. Donnellan was also invited to give a report on *OIML overview and legal metrology development*. Well-known domestic experts from NIM China, the university and research institute, were also invited to deliver speeches on frontier technology such as *time and frequency benchmark research and application, technology* and *application of cold and atomic clocks*, and *fibre optic time-frequency transmission*. Details were given on the current status both on the domestic market and trends worldwide.

During the forum, two other events took place: the opening ceremony of the National Time Frequency Measurement Center (Shanghai Laboratory), and the signing ceremony of cooperation between the Shanghai Institute of Metrology and Testing and the Shanghai Stock Exchange Technology Company. ■

The panel responded to questions from the audience

The World Metrology Day Ceremony attracted a large audience

Mr. Donnellan making his World Metrology Day presentation

COOMET

29th COOMET Committee meeting

Dresden, Germany 3–4 April 2019

NADEZHDA LIAKHOVA, COOMET Secretariat

The 29th COOMET Committee meeting was held on 3–4 April 2019 in Dresden, Germany. Specialists from 16 countries (Armenia, Belarus, Bosnia and Herzegovina, China, Cuba, Georgia, Germany, Kazakhstan, Kyrgyzstan, Lithuania, Moldova, Russia, Slovakia, Tajikistan, Ukraine and Uzbekistan) took part in the event, as well as representatives from the BIPM, OIML, EURAMET, WELMEC and APMP. Representatives of the State Etalons Centre of the Major State Service "Turkmenstandartlary" attended the meeting as guests.

The COOMET Committee approved the Regulation on the Working Group for the *Preparation of the COOMET Development Strategy* and its membership. A draft COOMET Development Strategy will be prepared in November 2019.

It was decided at the Committee meeting to change the name of SC 4.1 to *Capacity building in education and knowledge transfer* and to appoint Mrs. Yulia Bunyaeva (NSC "IM", Ukraine) as its Chairperson, as well as to extend the term of office of the current Chairpersons of the Joint Committee for Measurement Standards, TC 1.1 *General questions concerning measurements (General Metrology)*, TC 1.4 *Flow measurement*, TC 1.9 *Ionizing radiation and radioactivity*, and TC 4 *Information and training*.

The Committee requested the COOMET President (Mr. Valery Hurevich, Belarus) to sign, on behalf of COOMET, the updated Protocol of cooperation and interaction in the field of metrology between COOMET and EASC (the signing will take place in June 2019 at the 55th EASC meeting).

During the meeting of the COOMET Committee, the results of the work of the COOMET structural bodies over the past year were considered, in particular in terms of the implementation of the CIPM MRA (review of CMCs, comparisons of national measurement standards, evaluation of Quality Management Systems (QMS) of National Metrology Institutes (NMI) and Designated Institutes (DI) of COOMET member countries, etc.), legal metrology, information and training of metrologists, as well as various events held under the auspices of COOMET in 2018–2019.

Taking into account the 26th CGPM meeting held in November 2018, the Resolutions of the CGPM were discussed regarding the redefinition of the SI units and the tasks of the COOMET structural bodies and NMIs of the COOMET member countries, related to these resolutions. It was agreed to hold a workshop *Redefinition of the International System of Units (SI)* in October 2019 at the VNIIM premises, named after D.I. Mendeleev, Saint Petersburg, Russia.

An updated version of the COOMET Program of Comparisons (as of 3 April 2019) was signed by the COOMET President. The COOMET Committee supported the Program previously approved by the COOMET Presidential Council Policy and the Plan of the Technical Committee of the COOMET Quality Forum related to the transition to ISO 17034:2016 and ISO/IEC 17025:2017 for the evaluation of QMS of COOMET NMIs and DIs, as well as the Work Program of TC 2 *Legal Metrology* for 2019–2020.

The meeting participants were informed about preparations for the VIII International Competition *The Best Young Metrologist of COOMET – 2019* (to be held on 5–6 June 2019 in Kazan, Russia). 21 young metrologists from COOMET NMIs and DIs will participate in the competition. A scientific and practical conference on current problems facing metrology will be held in conjunction with the competition.

The following COOMET publications in the field of Legal Metrology were approved by the COOMET Committee:

- Information Material COOMET I/LM/8:2019 *Overview on the progress with prepackages control in COOMET member countries*; and
- Information Material COOMET I/LM/9:2019 *Metrological Supervision performed by metrological services of legal entities. General Principles*.

The Work Program of TC 2 *Legal Metrology* for 2019–2020 was approved by the COOMET Committee.

For their considerable personal contribution to the work and activities of COOMET, the Distinguished Title *Honorary Metrologist of COOMET* was given to the following specialists of the organizations of COOMET member countries:

- Mr. Kamo Movsisyan (Armenia);
- Mrs. Annette Kögler (Germany);
- Mr. Toktabek Tokanov (Kazakhstan);
- Mr. Vladimir Krutikov (Russia);
- Mr. Jurakhon Rahimzoda (Tajikistan); and
- Mr. Georgy Leonov (Ukraine).

During the meeting breastplates were solemnly awarded.

The next COOMET Committee meeting will be held in April 2020 in Kazakhstan.

Lastly, due to the imminent revision of the CIPM MRA Agreement, a training seminar within the framework of the BIPM CB&KT Program was held on 2nd April 2019 for the Chairpersons of TC 1.1, TC 1.12 and TC 3.1, immediately prior to the COOMET Committee meeting. ■

Delegates attending the 29th COOMET Committee meeting

AFRIMETS

13th AFRIMETS General Assembly and associated meetings

Helnan Dreamland Hotel, Giza, Egypt 8–12 July 2019

JACO MARNEWECK
AFRIMETS Vice-Chair, Legal Metrology

The 13th annual AFRIMETS General Assembly and associated meetings took place in Giza, Egypt from 8 to 12 July 2019 at the Helnan Dreamland Hotel.

The meetings were hosted by Egypt and supported by the National Institute of Standards (NIS). The meetings were well attended and the following dignitaries were noted:

- His Excellency Prof. Dr. Yasser Abdel Fattah, Deputy Minister of Higher Education and Scientific Research,
- Dr. Wynand Louw, President of the CIPM,
- Mr. Anthony Donnellan, BIML Director,
- Mr. Ian Dunmill, BIML Assistant Director, and
- Dr. Sten Bergstrand, BIPM.

From Monday, 8 July, various Technical Committee meetings took place including TC-Legal dealing with all Legal Metrology issues. Noting the launch of the operational phase of the African Continental Free Trade Agreement (AfCFTA) on 7 July 2019, and recognising the importance of trade in prepackages between AFRIMETS member states, the AFRIMETS TC-Legal Project Group dealing with prepackages, which is chaired by South Africa, will start the development of AFRIMETS harmonised requirements for prepackages to ensure their free movement between African countries.

TC-Legal also approved a training plan for future development of legal metrologists in new fields of operation, mainly in the areas of health, safety and the environment, and requested scientific metrology experts to assist the TC-Legal Work Group on Education with developing requirements for fundamental education in pressure, temperature, electrical energy, gas chromatography, dimension, flow and time and frequency.

AFRIMETS is committed to supporting the OIML RLMO Round Table as a network and a forum for information sharing, as a group that has a role in initiating actions, and as a source of advice and feedback for the OIML. AFRIMETS, as a member of the OIML CEEMS Advisory Group (AG), will also attend the OIML CEEMS AG meeting in October 2019 and contribute ideas and proposals with regard to OIML Training Centres, development of e-Learning modules, scholarship programmes for future leaders in legal metrology, and development of related documents.

On 9 July, the Executive Committee discussed issues relating to AFRIMETS membership and associates, reviewed nominations for AFRIMETS office bearers for 2019/2021 received from members, heard recommendations with respect to the AFRIMETS Model for Sustainability from its National Measurement Institute and Legal Metrology Body Directors, and received feedback on international liaisons.

Aiming to support AFRIMETS as it moves towards financial independence, the AFRIMETS Secretariat was tasked to develop the modalities, including policies and procedures, to introduce a membership fee based system in a phased approach over three years.

It was further resolved to recognise the important role that Directors from LMI/LMB play within AFRIMETS, and the Secretariat was requested to revise the AFRIMETS MoU to include their specific roles.

The Association of Analytical Chemists, AOAC Sub-Sahara was welcomed as Associate member of AFRIMETS.

The Kingdom of Morocco was congratulated on acceding to the Metre Convention and becoming the 60th Member State party to the Metre Convention.

On Wednesday, 10 July, two AFRIMETS workshops, supported by the Physikalisch-Technische Bundesanstalt (PTB), Germany, took place in parallel: a scientific workshop dealing with the revised SI and testing in Africa, and also a legal metrology workshop dealing with the OIML Certification System (OIML-CS) and its support of type approval in Africa. Anthony Donnellan and Ian Dunmill made meaningful contributions, through presentations, to the legal metrology workshop. Presentations on how type approval takes place in their respective countries were made by Egypt, Kenya and South Africa at the workshop.

The AFRIMETS GA open session took place on Thursday, 11 July and members expressed their appreciation to the PTB for its continued support to AFRIMETS. It also noted the announcement by Dr. Barbara Siegmund that the PTB Pan African Development Project has been renewed and that its next phase will commence in September 2019, which will benefit AFRIMETS as a whole.

The open session of the AFRIMETS GA was followed by a closed session on Friday 12 July.

The AFRIMETS GA elected the office bearers in the table opposite for the period 2019 to 2021 and wished them all the best with their important tasks:

The Intra-Africa Metrology System, AFRIMETS, remains committed to harmonising accurate measurement in Africa, establishing new measurement facilities, and gaining international acceptance for all measurements critical to export, environmental monitoring and sanitary and phyto-sanitary issues. ■

Chair	Prof. Dr. Mohamed Amer	NIS	NEWMET
Vice-Chair Scientific	Dr. Henry Rotich	KEBS	EAMET
Vice-Chair Legal	Mr. Jaco Marneweck (2nd term)	NRCS	SADCMEL

Office bearers elected for the period 2019 to 2021

	Scientific	**Legal metrology**
CEMACMET	Mr. Aristide Nguedeu	tbc in September
EAMET	Mr. Philibert Zimulinda	Mr. John-Paul Musimami
MAGMET	Mr. Benjaloun	Mr. Abdelaziz
NEWMET	Mr. Bede Obayi	Mr. Paul Date
SADCMET/MEL	Mr. Donald Masuku	Mr. Jaco Marneweck
SOAMET	tbc	tbc

SRMO representatives noted

Delegates attending the 13th AFRIMETS General Assembly

AFRIMETS TC-Legal

SUSTAINABLE DEVELOPMENT

Adding Value: Quality Infrastructure for Sustainable Development

Session 62, WTO Aid for Trade Global Review 2019

WTO, Geneva, Switzerland 4 July 2019

IAN DUNMILL, BIML

The Aid for Trade Global Review 2019 took place from 3–5 July at the WTO under the theme "Supporting economic diversification and empowerment for inclusive, sustainable development through Aid for Trade".

By addressing the supply-side capacity and trade-related infrastructure constraints of developing, and in particular least developed countries, Aid for Trade helps to advance the 2030 Agenda for Sustainable Development. It also aims to make trade more inclusive, and ensure that its benefits are spread further and wider. The focus in 2019 is on how trade can further contribute to economic diversification and empowerment.

The OIML was invited to participate in one of the sessions on Quality Infrastructure (QI) which was jointly organized by The United Nations Industrial Development Organization (UNIDO), the Swiss State Secretariat for Economic Affairs (SECO), and the Ministry of Trade, Industry and Tourism of Colombia. The session demonstrated QI's contribution to three pillars of the Sustainable Development Goals (SDGs): people, prosperity, and planet.

By showcasing QI's impact on sustainable development, the session highlighted the many ways in which metrology has a significant effect. Examples included:

- how metrology protects consumers in Malawi, thereby ensuring the needs of people are met;
- how upgrading the Colombian quality infrastructure enabled more exports, thereby promoting prosperity; and
- how standards improve sustainability in the Indonesian seafood sector, thereby protecting the planet.

This session was chaired by Mrs. Sharonmae Shirley, Chief Executive Officer of the Jamaica National Agency for Accreditation and Co-Chair of the ILAC-IAF Joint Development Support Committee (JDSC), who reiterated the review's objectives.

She explained that global trade is increasingly embedded within global value chains (GVCs) and governed by quality standards and regulatory requirements for sustainable development. However, many developing country producers and exporters still face substantial challenges in meeting and proving conformity of their products and services to those requirements.

She reminded attendees of the INetQI definition of QI, and concluded that establishing a robust QI system is a pre-requisite for developing countries to trade competitively, to invest effectively and to transform sustainably, and that a modern holistic QI relies on institutions and services in standardization, metrology, accreditation, conformity assessment and market surveillance, which can provide trusted measurement, prove consistent compliance, and facilitate international trade. As such, it could contribute greatly to strategies, policies and actions by developing countries to advance all 17 Sustainable Development Goals.

Ms. Monica Rubiolo
Head of Trade Promotion, SECO

Ms Rubiola provided a background to SECO's past involvement in the development of QI and explained that today, it is widely recognized that it is important to view QI as a system in order to ensure its sustainability, and not only strengthen the supply side, but also create demand for quality services by raising awareness and providing support to the private sector. This systemic approach to quality infrastructure development is demand-driven and based on market needs.

She said that SECO and UNIDO have therefore developed a unique and systemic approach which focuses on providing targeted quality infrastructure services along specific value chains. The approach covers governance, quality infrastructure institutions and services, enterprises, and consumers. It includes:

1) enhancing the capacity quality infrastructure institutors;
2) srengthening private sector capacities to comply with market requirements; and
3) creating demand for quality.

This unique approach is reflected in the Global Quality and Standards Programme (GQSP) funded by Switzerland and implemented by UNIDO in eight countries, on four continents.

Mr Willy Harrison Muyila
Deputy Director General of the
Malawi Bureau of Standards

Mr Muyila described how consumers could be protected through strengthening national quality infrastructure, particularly metrology, in Malawi, which is a land-locked country with an agriculture-based economy where micro, small and medium-sized industries are the backbone of the economy. Malawi has been facing challenges to ensure consumer protection in terms of delivering the right quantity and quality of goods from businesses to consumers.

Between 2013 and 2018, UNIDO implemented two projects which provided technical assistance to the Malawi Bureau of Standards (MBS):

- "Market access and trade capacity-building support for agro-industrial products (MATCB)"; and
- "Development of a robust standardization, quality assurance, accreditation and metrology (SQAM) infrastructure in Malawi".

The two projects were aimed at setting the foundations for an effective and sustainable national quality infrastructure, in particular strengthening the metrology capacity in the country. Mr Muyila gave three specific examples on how enhanced metrology capacity contributes to consumer protection in Malawi:

1) Malawi Bureau of Standards (MBS) mass laboratory services achieved accreditation based on ISO/IEC 17025 for electronic balances and mass pieces in January 2019. This accreditation ensured the accuracy of balances and weight sets used by industry, traders, supermarkets, and hospitals through the calibration and verification of weighing instruments at regular intervals. This process guaranteed that industrial and domestic consumers are buying the right quantity of goods, which is particularly important in the case of household goods (rice, maize, sugar, meat, fish, and others) to protect consumers, such as women, children and vulnerable groups. It has been recorded that the number of complaints about the usage of improper balances and weight sets in trade in Malawi has been reduced by 10 % over the past year.
2) In Malawi, consumers are often charged unfair prices when buying petroleum at petrol stations; sometimes they are buying petroleum which has been mixed with rebated fuels such as kerosene. To overcome this and to protect consumers, the use of internationally traceable and calibrated measuring vessels by MBS to calibrate dispensing pumps throughout Malawi guarantees that the right quantity of fuel is supplied to customers. The MBS now regularly inspects and provides modern, mobile volume calibration services to petrol stations using

WTO Aid for Trade Global Review 2019 Speakers

standard volume measures, and has instituted the use of oil analysers and X-ray florescence spectrometers for identifying the purity of petroleum products and lubricants, thus protecting consumers against the supply of substandard products.

3) MBS also achieved international accreditation based on ISO/IEC 17025 for testing laboratories on aflatoxin levels in legumes, cereals, and pulses in October 2018. This accreditation ensures MBS's capacity to certify foods, and ensures that consumers are protected against consuming substandard raw and processed foods. In particular, consumers are protected against the risk from aflatoxin contamination in foods, which is known to cause serious illness in humans and animals.

Mr Ian Dunmill
Assistant Director
International Organization of Legal Metrology (OIML)

Mr Dunmill reacted to Mr Muyila's presentation by giving the full picture of how metrology can contribute to consumer protection, and reminded delegates that metrology is fundamental to a huge number of the things which all humans do every day.

As technology advances, scientists and industry obviously need higher and higher levels of accuracy in the measurements they need to make. However, the OIML is concerned with *legal metrology*, the regulation of measurements and measuring instruments, and one of legal metrology's main aims is the protection of consumers, because measurements are everywhere in everyone's daily lives. For example:

- when we buy food in a market or supermarket;
- when we fill our cars with fuel;
- when we use electricity, gas or water in our houses;
- when we visit the doctor or hospital;
- when our cars are tested for emissions;
- when police make speed or breath alcohol checks.

Everyone relies on the existence of regulations in these areas, and the effective enforcement of those regulations in our societies. These regulations set the levels of accuracy for measuring instruments, which enable an appropriate level of confidence in their measurements, and specify technical requirements to help eliminate fraud. They typically also set maximum levels of harmful substances in food, specify what materials products may or may not be made of to ensure consumer safety – such as water pipes and toys, and specify test requirements for motor vehicles to ensure roadworthiness.

A sound metrology system is part of a modern quality infrastructure system and is essential for the achievement of effective trade, health, safety and environmental protection policies. Therefore, the capacity of a national metrology system has to be built and strengthened in terms of:

- traceability to the International System of Units, or SI (scientific metrology);
- confidence in testing and measurement results through standardization, accreditation, certification and calibration (industrial metrology); and
- regulated measurements and measuring instruments (legal metrology).

Many developing economies still lack a robust metrology system to support the protection of their consumers, at the same time as facing new challenges due to the increasing complexity of the measurements involved. To build robust metrology systems to protect consumers, developing countries need to:

- strengthen their legislative and institutional environment in support of the national metrology infrastructure;
- develop and upgrade their National Metrology Institutions and calibration services so they can be recognized nationally, regionally and internationally; and
- improve type approval and verification services to serve their local value chains, imports and exports.

Initiatives in the development of national metrology services support a number of the UN's Sustainable Development Goals. Some of these are quite specific and it is easy to see how these relate to the subjects mentioned earlier, but it is easily overlooked that metrology can, over the longer term, make a significant contribution to SDG 1 – *No poverty*. An effective legal metrology system can help ensure that farmers in poor countries are able to obtain a fair price for what may be a small amount of excess production they have available for sale. At the same time, legal metrology ensures that even the poorest consumers get the correct amount of produce for the little money they have. Over time, this level playing field helps to increase confidence in the market, at the same time as increasing consumer protection, and thus economic development. This in turn helps to reduce poverty, and to create a society in which consumers have confidence in the market at the same time as receiving a high degree of protection.

Another, maybe even less evident example concerns road safety. Many developing economies have poor roads and poor technical control of vehicle safety, as well as lacking adequate checks on overloaded and polluting vehicles, speeding, and consumption of alcohol by drivers. Adding to these problems is the

existence of the informal sector of the economy, which means there are many roadside traders, often involving the young. The cost to society of accidents resulting from this dangerous mix can therefore be very high – one study in Vietnam suggested that road accidents cost their society around 5 % of GDP! A comparatively small investment in a legal metrology system which could

- check and control vehicle weights,
- check on the roadworthiness and environmental of vehicles, and
- check speeding and alcohol consumption

would go a very long way to improving consumer safety at the same time as significantly reducing costs to society, and therefore improving economic conditions, and again helping to reduce poverty.

These examples show how everyone is affected by a legal metrology system, and everyone in society can benefit from its development.

Ms. Martha Janneth Neira
Director Laboratorios M&N y cìa Ltda, Colombia

Ms Neira spooke on how her company, which exports cosmetic products, had benefitted from the development of the national quality infrastructure in Colombia. In doing so, she also spoke on behalf of more than 1 000 small and medium-sized enterprises in Colombia that benefited, particularly from improvements in conformity assessment.

International cosmetics production and trade are heavily governed by regulations. The cosmetics sector in Colombia faced some challenges before, for example:

- most cosmetics producers were unaware of the competitive advantage and economic implications provided by conformity to standards and market requirements, and by quality certifications;
- the private sector could not manage this by itself, and national capacities need to be improved in order to assess compliance of cosmetics ingredients, production processes and final products;
- the international standard for Good Manufacturing Practices (GMP) of cosmetics – ISO 22716 is essential to meet the mandatory requirements of high-end markets such as Europe, Japan, and the USA. However, in 2015, only five Colombian companies were certified.

Enabling cosmetics exports required a holistic intervention stretching from the producers of natural ingredients and cosmetics, through the laboratories and conformity assessment bodies, to the national institutions who secure international recognition from foreign markets.

The "Safe+" project was implemented from 2015–2018 by UNIDO, funded by SECO, the Colombia Productiva programme and the Colombian Ministry of Trade, Industry and Tourism. This project strengthened the technical capacities of Colombia's key quality infrastructure institutions in the cosmetics value chain, particular the conformity assessment bodies:

- by maintaining national measurement standards and internationally traceable calibration services, the National Metrology Institute (INM) was strengthened and is capable of providing reliable and accurate measurement services;
- the National Accreditation Board (ONAC) strengthened the National Quality Subsystem (SICAL) for the cosmetics sector, and thereby conformity assessment service providers could be attested independently to satisfy the local and international markets and authorities;
- testing laboratories were also developed according to international best practice and could provide internationally recognized services, demonstrating the quality of products.

As a result of this systemic approach, more than 3 400 people were trained and their technical competence was improved. Five public national institutions, 16 testing laboratories, 24 companies and two associations of small producers were strengthened through receiving deep technical assistance, and therefore 1 000 companies benefitted.

The sum of these actions reduced the rejections of products at the borders, so exports increased and prosperity was created in the cosmetics sector. From 2015 to 2017:

- direct employment was increased by 2.2 %;
- sanitary risks were reduced by 17 % and non-conformities by 43 %;
- national cosmetics production was increased by 11.7 %.

In the case of her own company, the benefits were quite considerable:

- USD 100 000 was invested in infrastructure, research and development;
- 70 % employment increase in two years;
- 81 % value increase in direct exports and 200 % increase in indirect exports;
- 45 % increase in natural ingredients local sales, equivalent to USD 250 000;
- Good Manufacturing Practices certification according to ISO 22716 was granted;
- four natural extracts complied with the REACH regulations, involving physiochemical studies, and efficacy and safety tests.

These results, as well as being positive and strategic for the company's own growth, have helped to define its identity as a company which is fully committed to quality, global competitiveness and sustainability.

Mr Sean MacCurtain
ISO CASCO Secretary

Mr MacCurtain explained the background to how conformity assessment can build trust along value chains, and enable trade from developing countries.

He started by saying that conformity assessment consists of the processes and procedures used to demonstrate conformity to specific requirements by regulatory authorities or clients of a product or service, management system, an organization or personnel. International trade features standards and technical regulations to protect health, safety and the environment, and compliance with these requirements enables and drives trade, especially in terms of trade in heavily-regulated sectors such as cosmetics exports to developed markets.

As part of a national quality infrastructure system, a reliable conformity assessment system and its services can provide trustable testing and inspection results, to verify and demonstrate compliance to foreign regulatory bodies and clients, and therefore improve trade competitiveness, add value to local value chains and enable exports from developing countries.

The WTO/TBT Agreement also promotes mutual or international recognition of conformity assessment results, to avoid duplicative or multiple testing or inspection and to reduce or remove technical barriers to trade. However, many developing countries still lack capable conformity assessment institutions and services, which prevents their integration into global value chains and limits the benefits they can obtain from international trade.

Therefore, strengthening the capacity of conformity assessment services according to international standards and requirements helps developing countries to ensure consistency worldwide, facilitate mutual recognition or acceptance of conformity assessment results, and build trust and reduce cross-border trade costs.

The ISO CASCO Committee is ready to work with international partners to build internationally-recognized conformity assessment system for developing countries, to support private sector development, export diversification and economic prosperity, to advance their economic transformation through competitive trade.

Mr Herman Wisse
Managing Director
Global Sustainable Seafood Initiative (GSSI)

Mr Wisse described how sustainability standards foster the supply of sustainable seafood, which was an opportunity to contribute to SDGs and a challenge to make this economically viable.

As a sustainable development opportunity in support of the SDGs, seafood creates employment and income in aquaculture and fishing, improves living conditions of fisheries communities, and maintains biodiversity in the oceans.

The challenges associated with this are that markets have to value sustainable production through accepting the price premium this entails, since sustainability compliance is costly to proof and maintain. There is also a need for better management of the environmental impact on fisheries (plastics in the oceans) and by fisheries (overuse of antibiotics in aquaculture). Transforming seafood production therefore comes at a cost, since production patterns must be changed and compliance with sustainability criteria must be proven through recognized schemes.

The GSSI works on how to make the seafood sector more competitive and SDG supportive through:

- developing suppliers to make sustainable seafood a profitable economic opportunity;
- global harmonization and benchmarking of schemes which allows affordable proof of sustainability, such as economic, social and environmental benefits;
- public and private partnership.

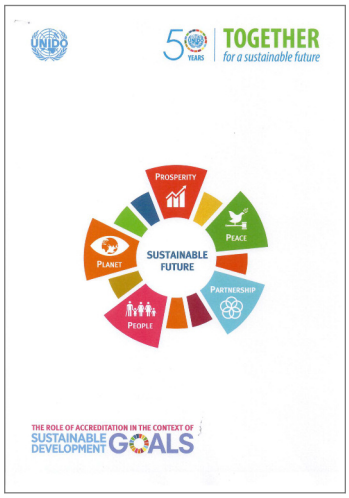
Mr Bernardo Calzadilla-Sarmiento
Director, Department of Trade,
Investment and Innovation, UNIDO

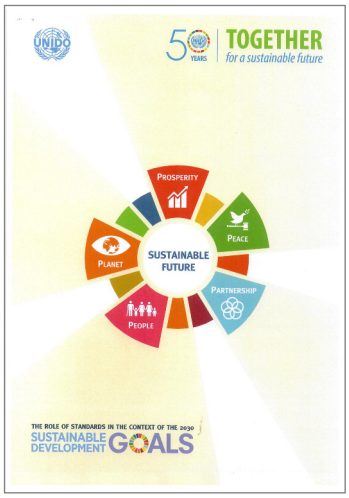
Mr Calzadilla-Sarmiento concluded the discussions by explaining that UNIDO has been one of the biggest development partners in quality infrastructure for more than 40 years. He said that Quality Infrastructure contributes to prosperity and economic development by stimulating trade competitiveness, industry and innovation. It meets the needs of people by ensuring food security and promoting good health and well-being, and also contributes to the protection of the planet through the efficient use and sustainable management of natural resources, stimulating climate action and protecting the biosphere.

He then took the opportunity of this event to launch UNIDO's new publication *Sustainable Development and*

the Future of Quality Infrastructure, which emphasizes the fundamental enabling function of an appropriate quality infrastructure for the 2030 Agenda for Sustainable Development and its support for each SDG. The new publication outlines future needs, especially in the context of the new industrial revolution and digital economy and builds on previous UNIDO publications including *The Role of Standards in the Context of the 2030 Sustainable Development Goals*, *The Role of Accreditation in the Context of the 2030 Sustainable Development Goals*, and *The Role of Metrology in the Context of the 2030 Sustainable Development Goals*. ■

The brochure can be obtained from the UNIDO website:
https://www.unido.org/sites/default/files/files/2019-07/SDG-QI_BROCHURE_FINAL_0.PDF





Brochures on the role of Metrology, Accreditation and Standards
in the context of the 2030 Sustainable Development Goals are also available from UNIDO.

R 117

Report on the meeting of TC 8/SC 3/p 4

Project Group for the Revision of OIML R 117 *Dynamic measuring systems for liquids other than water*

NRCS, Cape Town, South Africa 26–29 March 2019

RALPH RICHTER, NIST, USA - PG convener
Luis Mussio, BIML Contact

The Project Group for the revision of OIML R 117 *Dynamic measuring systems for liquids other than water* (TC 8/SC 3/p 4) met on 26–29 March 2019 in Cape Town, South Africa.

The meeting was well attended and was hosted by the National Regulator for Compulsory Specifications, Legal Metrology Department (NRCS). 20 of the 25 Member States that serve as P-members on the Project Group were represented at the meeting, either in person or through a proxy (80 % participation).

The voting and commenting on the 2CD package of R 117 closed on 11 March 2019. The 2CD passed with 100 % consensus "Yes" votes (zero "No" votes) and votes were submitted by 92 % of the 25 P-members. However, since over 50 pages of non-editorial comments were received on the 2CD package, the convener of the PG, Mr. Ralph Richter from NIST (United States) decided that a meeting was needed to discuss all the proposed changes and issue a 3CD, adhering to the new procedures that should be followed when a significant number of non-editorial comments are received on an "Approved CD" (found in 6.4 of OIML B 6-1:2017 *Directives for OIML Technical Work*).

At the meeting, for the first one and half days, the PG worked in teams of subject-matter experts to resolve all of the comments and improve certain specific technical areas of R 117.

Each team was led by an expert in the area:

- Bunkering Team, Wim Volmer (NMi, The Netherlands);
- LNG Team, Luciano Burtini (Measurement Canada);
- Software Team, Srinivas Bobbala (NZ Trading Standards);
- Metering and Gas Elimination Team, Dmitri Karimov (IDEX); and
- Fuel Dispenser Team, Mario Zamora (NMI, Australia).

A series of full project group sessions was then held, during which team recommendations were discussed and implemented. These discussions resulted in **all the technical issues being resolved and a new 3CD of R 117 being developed and approved with 100 % consensus "Yes" votes during the meeting**.

The Project Group convener wishes to thank all of the meeting participants for their perseverance, camaraderie, dedication, and hard work in Cape Town and wishes to thank all of our colleagues in South Africa (especially Thomas Madzivhe and Jaco Marneweck) for all of their efforts in hosting an excellent meeting.

This revision of R 117 is now at CIML Preliminary Online Ballot stage, with a deadline of 25 September 2019 for CIML votes and comments. ■

R 46

Report on the meeting of TC 12/p 1

Project Group for the Revision of OIML R 46 *Electricity meters*

Tukes, Helsinki, Finland 22–24 May 2019

Dr Phillip Mitchell, NMI Australia - PG convener

The Project Group for OIML TC 12/p 1, Revision of OIML R 46 *Electricity meters*, met from 22 to 24 May 2019. The meeting was chaired by the Project Group convener, Dr Phillip Mitchell, National Measurement Institute, Australia.

The meeting was hosted by the Finnish Safety and Chemicals Agency, Tukes, in Helsinki, and included a site visit and laboratory tour of VTT Mikes, the National Metrology Institute of Finland.

The Project Group is relatively large and comprises 31 participating (P-) members and 8 observer (O-) members. The meeting was attended by 30 participants representing 16 P-member states, together with Ian Dunmill (BIML contact person for this PG).

This was the second meeting of the Project Group. The group discussed comments received on the second working draft (2WD) of R 46. The meeting also provided an opportunity to discuss and make progress on key topics assigned to subgroups.

The current draft is titled *Electrical energy meters – Alternating current (a.c.)* to reflect the scope of the Recommendation which is no longer limited to only active energy (kilowatt hours). The Project Group is considering a number of topics, and during the meeting the original five subgroups were consolidated into the following four subgroups:

- Subgroup 1: *Quantities and harmonics*. This is to review the appropriate measurement quantities that should be included in OIML R 46 including reactive energy, apparent energy, and measurement of the fundamental only versus fundamental with harmonics.
- Subgroup 2: *Electric vehicle charging stations*. This is to review OIML R 46 to ensure it is relevant and applicable for electric vehicle charging applications.
- Subgroup 3: *Smart street lighting*. This is to review OIML R 46 to ensure it is relevant and applicable for individual device metering applications such as smart street lighting.
- Subgroup 5: *Remote displays and meters with modular components*. This is to review OIML R 46 to provide appropriate requirements and regulatory options for meters with remote displays (via web-enabled devices) and with modular components.

Another significant topic discussed at the meeting was liaison with other standard-setting bodies, primarily the IEC and ANSI. The project group received an update from IEC liaison member Henri Schouten on recent IEC activities, particularly an IEC TC 13 WG 11 meeting held earlier in May. The Project Group also received input on ANSI standards from the North American participants. The Project Group will continue to liaise with these bodies to harmonise and align requirements to the greatest extent possible.

The Project Group also discussed the level of participation from all 31 P-member states. With only just over half of these members represented at the meeting, the convener encourages all members to actively participate in the future work of this PG.

The next step in the revision of R 46 is to develop the next draft with input from the subgroups. At this stage, the next meeting is tentatively planned for mid-2020.

The OIML TC 12/p 1 convener would like to express his sincere thanks to Tuomo Valkeapää and Heikki Koivula for being excellent hosts.

Top: Participants in the PG meeting. Bottom: Helsinki, Finland

SAARC

South Asian Association for Regional Cooperation

Second Workshop on Best Practice in Metrology Law Development

Thimphu, Bhutan 12–13 June 2019

MANFRED KOCHSIEK
Former CIML Acting President / PTB Consultant

1 Introduction

Despite economic liberalization, solid growth and preferential trade agreements, the intra-regional exchange of goods within the *South Asian Association for Regional Cooperation* (SAARC) is still limited. **Technical barriers to trade** are a major cause in this respect, which in turn are primarily due to non-harmonized standards and conformity assessment procedures, as well as insufficient metrology, testing and accreditation systems – in short: a lack of quality infrastructure.

A first *Workshop on Best Practice in Metrology Law Development* was hosted by the Nepal Bureau of Standards & Metrology (NBSM) in Kathmandu from 30–31 March 2016. The main objective of the workshop was to develop a better understanding of best practice for developing legislation for legal metrology. The two-day workshop provided insights to existing national legislation and its implementation in the SAARC Member States. The workshop provided a platform to trigger closer collaboration and information exchange in the region among national metrology organizations.[1]

The Second SAARC-PTB Workshop on *Best Practice in Metrology Law Development* was hosted by the Bhutan Standards Bureau from 12–13 June 2019 under the technical assistance of the PTB. Like the 2016 meeting, the Workshop was organized within the framework of a cooperation project between SAARC and the PTB, funded by the German Ministry for Economic Cooperation and Development.

The objectives of the Workshop were to facilitate, upgrade and harmonize metrology laws and regulations in line with international best practices by:

(a) providing a forum for regional exchange and information sharing on legal metrology developments;

(b) further improving understanding of international trends and practices in metrology law development; and

(c) offering advice and benchmarking for the future development of the legislative framework.

2 What is SAARC

2.1 Introduction to SAARC

The **South Asian Association for regional Cooperation** (**SAARC**) is a regional intergovernmental organization and geopolitical union in South Asia. Its member states include Afghanistan, Bangladesh, Bhutan, India, Nepal, the Maldives, Pakistan and Sri Lanka. SAARC comprises 3 % of the world's area, 23 % of the world's population (1.8 billion inhabitants) and 9 % of the global economy, as of 2019 (see Fig. 1).

Country	Population (Million)	GDP (Nominal)	GDP per Capita (PPP)
Afghanistan (AF)	37.2	$20.2 bn	$570
Bangladesh (BD)	168.0	$262.0 bn	$1592
Bhutan (BT)	0.83	$2.5 bn	$3130
India (IN)	1368.7	$2716.7 bn	$2092
Maldives (MAL)	0.45	$4.8 bn	$11134
Nepal (NEP)	29.9	$28.8 bn	$983
Pakistan (PAK)	204.6	$312.5 bn	$1555
Sri Lanka (SL)	21.0	$87.3 bn	$4073

Fig 1: Population, GDP of SAARC Members 2019

SAARC was founded in Dhaka in 1985. Its secretariat is based in Kathmandu, Nepal. The organization promotes the development of economic and regional integration. It launched the South Asian Free Trade Area in 2006. SAARC maintains permanent diplomatic relations at the UN as an observer and has developed links with multilateral entities, including the EU.

2.2 South Asian Free Trade Area (SAFTA) and SARSO

SAFTA was envisaged primarily as the first step towards the transition to a South Asian Free Trade Area, leading

[1] OIML Bulletin Vol. LV11, No 4, Oct. 2016, p.26

subsequently towards a Customs Union, Common Market and Economic Union. In 1995, the Sixteenth session of the Council of Ministers (New Delhi, 18–19 December 1995) agreed on the need to strive for the realization of SAFTA and to this end an Inter-Governmental Expert Group (IGEG) was set up in 1996 to identify the necessary steps for progressing to a free trade area.

Besides, the South Asian Standards Organization (SARSO) was founded in 2011 to deal with technical barriers to intra-SAARC trade. In addition to standardization, SARSO is also responsible for interdisciplinary subjects related to quality infrastructure.

3 Preparation of the second SAARC-PTB *Workshop on Best Practice in Metrology Law Development*

Following the outcome of the first Workshop, a benchmark of metrology laws of all SAARC countries against OIML D 1:2012 and the WTO TBT Agreement was carried out[2]. All the countries were informed about their benchmark-results. As a result, two countries drew up a new law on metrology, two countries have no law on metrology at the present time, and the other four countries have improved their legislation on legal metrology. A benchmark update was prepared.

4 Two-day workshop

A welcome address and opening remarks were given by the Director General of the Bhutan Standards Bureau, SAARC-Secretariat, SARSO, Mr. Miesner, PTB Project Leader and Mr. Loknath Sharma, Bhutan Minister of Economic Affairs.

Presentations and lectures were given by Prof. Manfred Kochsiek:

- "Metrological infrastructure of a country based on international best practice" followed by a Q&A session;
- Presentation and discussion of results of the second benchmarking exercise on metrology laws of SAARC countries;
- Presentation of the new OIML Certification System (OIML-CS, 2018) followed by a discussion on the practical relevance of the System for integration of SAARC countries;
- To facilitate an inter-regional exchange of experience, Dr. Osman Zakaria (CEO), NIM Malaysia, presented a case study on NIM Malaysia and its involvement in APLMF / ASEAN-related activities;
- Delegates from the all the SAARC Member States presented their country reports on the status of metrology law development. The legal metrology organizations (LMO) of the SAARC Member States were requested to send their Metrology Acts, together with their regulations (if available) to the SARSO Secretariat which will then be circulated to the LMOs for reference.

5 Group work

Current issues and challenges in modernizing metrology laws and regulations should be discussed following the Agenda. Delegates discussed the topics of interest and the expectations of the Member States which were delivered prior to the workshop. The proposal later was to discuss three topics of interest in three groups, as below.

5.1 Improved legislation

Actions: Collect case studies on the importance of metrology. Include the OIML-CS in national legislation. Conduct a study on cooperation between metrology authorities and inspection / enforcement bodies, e.g. border control.

5.2 Training and infrastructure

Actions: Training in more than eight measurement categories. Strengthen the legal metrology infrastructure, and make use of workshops to consider the major differences in the SAARC region.

5.3 SoPs, guidelines and other information

- Collect: Guides and guidelines from ASEAN, APMP, APLMF, OIML.
- Web-links should be announced. SoPs for breath analyzers, etc.
- Announcement of planned training, events, etc.
- India, as the biggest member country, should circulate the calendar of training programs in the field of legal metrology.

[2] OIML Bulletin Vol. LV111, No.2, April 2017, p.16

Fig 2: SAARC Member States

6 Conclusion and outlook

All eight SAARC countries have improved their legislation in the field of legal metrology. Two countries have a new law on metrology, two countries are preparing a law on metrology, and four countries have updated their legislation on legal metrology.

The SAARC countries took note that they can become "Utilizers" under the OIML-CS, and one or two have begun preparations to become OIML Issuing authorities.

Feedback from participants showed a very good assessment of the Workshop. A Bhutanese Newspaper and a TV station also reported on the Workshop, which the few but engaged metrology experts of Bhutan did an excellent job in organizing.

Several actions described in this report are already underway. ■

Contact information

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Fig 3: Group photo with Bhutanese colleagues in traditional attire. Center: the Bhutanese Minister for Economic Affairs

OIML Certification System (OIML-CS)

Introduction

The OIML-CS is a system for issuing, registering and using OIML Certificates and their associated OIML type evaluation reports for types of measuring instruments (including families of measuring instruments, modules, or families of modules), based on the requirements of OIML Recommendations.

The OIML-CS comprises two Schemes: Scheme A and Scheme B. Competence of the OIML Issuing Authorities and their Test Laboratories is demonstrated through self-declaration under Scheme B and accreditation or peer assessment under Scheme A.

The aim of the OIML-CS is to facilitate, accelerate and harmonize the work of national and regional bodies that are responsible for type evaluation and approval of measuring instruments subject to legal metrological control. In the same way, instrument manufacturers, who are required to obtain type approval in some countries in which they wish to sell their products, should benefit from the OIML-CS as it will provide evidence that their instrument type complies with the requirements of the relevant OIML Recommendation(s).

It is a voluntary system and OIML Member States and Corresponding Members are free to participate. Participating in the OIML-CS commits, in principle, the signatories to abide by the rules of the OIML-CS that are established in OIML B 18:2018 *Framework for the OIML Certification System (OIML-CS)*. Signatories voluntarily accept and utilize OIML type evaluation and test reports, when associated with an OIML Certificate issued by an OIML Issuing Authority, for type approval or recognition in their national or regional metrological controls.

The OIML-CS was launched on 1 January 2018 and has replaced the former OIML Basic Certificate System and the OIML Mutual Acceptance Arrangement (MAA).

Further information can be found at:

www.oiml.org/en/oiml-cs

For enquiries regarding the OIML-CS, please contact the OIML-CS Executive Secretary Paul Dixon (executive.secretary@oiml.org).

OIML certificates

OIML certificates issued under Scheme A and Scheme B can be downloaded from the database on the OIML website at:

https://www.oiml.org/en/oiml-cs/certificat_view

The database also includes certificates issued under the former OIML Basic Certificate System and the MAA. Although these two systems are no longer in operation, the certificates remain valid.

OIML Issuing Authorities, Utilizers and Associates

A summary of the approved OIML Issuing Authorities is given on the page opposite, and on the following pages a summary is published of those Utilizers and Associates that have declared that they will accept OIML certificates and/or OIML type evaluation reports as the basis for a national or regional approval.

Transition update

OIML Recommendations R 51 *Automatic catchweighers* and R 117 *Liquids other than water* transitioned from Scheme B to Scheme A on 1 July 2019.

R 46 *Active electrical energy meters* and R 137 *Gas meters* will transition from Scheme B to Scheme A on 1 January 2020.

Recent OIML-CS events

Reports on recent OIML-CS events are provided on the following pages.

OIML Certification System (OIML-CS)

List of OIML Issuing Authorities and their scopes

The list of OIML Issuing Authorities is published in each issue of the OIML Bulletin and can be downloaded at www.oiml.org/oiml-cs/oiml-issuing-authorities

Updated: 2019-07-29

		R 21:2007	R 46:2012	R 49:2006	R 49:2013	R 50:2014	R 51:2006	R 60:2000	R 60:2017	R 61:2004	R 61:2017	R 75:2002	R 76:1992	R 76:2006	R 85:2008	R 99:2008	R 106:2011	R 107:2007	R 117:1995	R 117:2007	R 126:1998	R 129:2000	R 134:2006	R 137:2012	R 139:2014	R 139:2018
AU1	National Measurement Institute Australia (NMIA)					■							■	■												
CH1	Federal Institute of Metrology (METAS)		■			■		■		■				■			■	■			■		■			
CN2	National Institute of Metrology, China (NIM)		■			■	■	■	■	■	■		■	■				■					■	■		
CZ1	Czech Metrology Institute (CMI)				■							■		■	■									■	■	
DE1	Physikalisch-Technische Bundesanstalt (PTB)							■				■		■												
DK2	FORCE Certification A/S					■				■				■			■	■				■	■	■		
FR2	Laboratoire National de Métrologie et d'Essais (LNE)					■		■						■							■					
GB1	NMO	■				■		■		■			■	■	■		■	■				■	■			
JP1	NMIJ/AIST							■					■	■												
NL1	NMi Certin B.V.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
SE1	Research Institutes of Sweden (RISE)							■	■	■				■	■											
SK1	Slovak Legal Metrology (SLM)			■	■									■												

OIML Certification System (OIML-CS)

List of Utilizers, Associates and their scopes

The list of Utilizer and Associate scopes is published in each issue of the OIML Bulletin and can be downloaded at www.oiml.org/oiml-cs/utilizers-and-associates

Updated: 2019-07-30

1 = Scheme A only
2 = Scheme A and MAA
3 = Scheme A and B
4 = Scheme A, B and MAA

		R 16:2002	R 21:2007	R 35:2007	R 46:2012	R 49:2006	R 49:2013	R 50:2014	R 51:2006	R 58:1998	R 59:2016	R 60:2000	R 60:2017	R 61:2004	R 61:2017	R 75:2002	R 76:1992	R 76:2006	R 81:1998	R 85:2008	R 88:1998	R 93:1999
AU	National Measurement Institute, Australia (NMIA)						2					2					2	2				
BE	Federal Public Service Economy		3		3		3	3	3			1		3		3		1		3		
CA	Measurement Canada											2				1		2				
CH	Federal Institute of Metrology (METAS)				1	2	2	1	1			2		1		1		2				
CN	State Administration for Market Regulation (SAMR)								1			2	1				2	2				
CO	Superintendencia de Industria y Comercio (SIC)		3		3	4	4	3	3			2		3		3	2	2		3		
CU	Oficina Nacional de Normalizacion (NC)	3	3	3	1		1	3	1	3	3	1	1	3	3	3		1	3	3	3	3
CZ	Czech Metrology Institute (CMI)						1											1				
DE	Physikalisch-Technische Bundesanstalt (PTB)						4	3	3			2		3		3		2		3		
DK	FORCE Certification A/S					2	2	1	1			2		1			2	2				
FR	Laboratoire National de Métrologie et d'Essais (LNE)		1		1	1	1	1	1			1		1		1	1	1		1		
GB	NMO Certification		3			4	4	3	3			2		3			2	2		3		
IN	Legal Metrology Division, Department of Consumer Affairs		3		3		4	3	3			2		3		3		2		3		
JP	National Metrology Institute of Japan / National Institute of Advanced Industrial Science and Technology (NMIJ/AIST)											2					2	2				
KE	Weights and Measures Department			3	3	4	4		3			4	4	3	3		4	4		3		
KH	National Metrology Centre (NMC)		3		3	3	3	3	3			1		3		3	1	1		3		
KR	Korea Testing Certification (KTC)																2	2				
LV	LNMC Ltd. Metrology Bureau																					
NA	Namibian Standards Institution				3	4	4	3	3			2		3			4	4		3		
NL	NMi Certin B.V.		3		3	3	4	3	3			2		3		3	1	2		3		
NZ	Trading Standards (Ministry of Business, Innovation and Employment) (MBIE)					4	4	3	3			2					2	2		3		
RU	VNIIMS																					
SA	SASO (Saudi Standards, Metrology and Quality Organization)				3		1						1					1				
SE	RISE Research Institutes of Sweden AB								3			2	1	3				2		3		
SK	Slovak Legal Metrology (SLM)																	2				
TN	National Agency of Metrology (ANM)		3		3	2	2	3	3			2		3			2	2		3		
US	National Conference on Weights and Measures (NCWM)											2										
ZA	NRCS: Legal Metrology					3	3		3			1					1	1		3		
ZM	Zambia Metrology Agency		3		3	3	3	3	3			1		3		3	1	1		3		

OIML Certification System (OIML-CS)

List of Utilizers, Associates and their scopes (Cont'd)

The list of Utilizer and Associate scopes is published in each issue of the OIML Bulletin and can be downloaded at www.oiml.org/oiml-cs/utilizers-and-associates

Updated: 2019-07-30

1 = Scheme A only
2 = Scheme A and MAA
3 = Scheme A and B
4 = Scheme A, B and MAA

		R 99:2008	R 102:1992	R 104:1993	R 106:2011	R 107:2007	R 110:1994	R 117:1995	R 117:2007	R 122:1996	R 126:1998	R 128:2000	R 129:2000	R 133:2002	R 134:2006	R 136:2004	R 137:2012	R 139:2014	R 139:2018	R 143:2009	R 144:2013	R 145:2015	R 146:2016
AU	National Measurement Institute, Australia (NMIA)																						
BE	Federal Public Service Economy	3			3	3			3				3				3	3					
CA	Measurement Canada																						
CH	Federal Institute of Metrology (METAS)				1	1					1		1		1		1						
CN	State Administration for Market Regulation (SAMR)																						
CO	Superintendencia de Industria y Comercio (SIC)	3			3	3		3	3		3		3		3		3	3					
CU	Oficina Nacional de Normalizacion (NC)	3	3	3	3	3	3		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CZ	Czech Metrology Institute (CMI)																						
DE	Physikalisch-Technische Bundesanstalt (PTB)				1	3			3				3		1			3					
DK	FORCE Certification A/S				1	1							1		3								
FR	Laboratoire National de Métrologie et d'Essais (LNE)	1			1	1			1		1		1		1		1	1					
GB	NMO Certification				3	3		3	3				3		3								
IN	Legal Metrology Division, Department of Consumer Affairs				1	3			3				3		1		3	3					
JP	National Metrology Institute of Japan / National Institute of Advanced Industrial Science and Technology (NMIJ/AIST)																						
KE	Weights and Measures Department				3			3	3		3				3	3	3	3	3				
KH	National Metrology Centre (NMC)	3			3	3		3	3		3		3		3		3	3					
KR	Korea Testing Certification (KTC)																						
LV	LNMC Ltd. Metrology Bureau										3				3								
NA	Namibian Standards Institution				3	3		3	3		3		3		3								
NL	NMi Certin B.V.	3			3	3		3	3		3		3		3		3	3					
NZ	Trading Standards (Ministry of Business, Innovation and Employment) (MBIE)				3	3		3	3				3		3								
RU	VNIIMS							3	3														
SA	SASO (Saudi Standards, Metrology and Quality Organization)								3														
SE	RISE Research Institutes of Sweden AB							3	3														
SK	Slovak Legal Metrology (SLM)																						
TN	National Agency of Metrology (ANM)	3			3	3		3	3		3		3		3		3	3					
US	National Conference on Weights and Measures (NCWM)																						
ZA	NRCS: Legal Metrology				3	3		3	3		3		3		3		3	3					
ZM	Zambia Metrology Agency	3			3	3		3	3		3		3		3		3	3					

OIML-CS EVENTS

InterWeighing Exhibition

Shanghai, P.R. China
10–12 July 2019

Paul Dixon, BIML

Introduction

InterWeighing is an international weighing industry exhibition organized by the China Weighing Instrument Association (CWIA). It was first held in 1995, with exhibitions held every two years until 2001 after which it has been held annually. This year, the exhibition was held in Shanghai, P.R. China, on 10-12 July and the OIML was invited by the CWIA to be represented at the exhibition.

Opening Ceremony

Paul Dixon, BIML Assistant Director, represented the OIML at the exhibition. He participated in the Opening Ceremony, giving a welcoming address, before cutting the ribbon with other invited guests to open the exhibition.

In his welcoming address, Mr Dixon highlighted how OIML Recommendations and the OIML Certification System (OIML-CS) aim to reduce technical barriers to trade to support industry and manufacturers, enabling them to export products across the globe. He also reiterated and confirmed the core and fundamental importance of the weighing industry to the work that the OIML performs.

Presentations on the OIML-CS

In conjunction with the exhibition, a series of technical presentations are normally delivered. The CWIA had allocated the afternoon session on 10 July to the OIML-CS, and Mr Dixon gave a presentation on the "Benefits of the OIML-CS to manufacturers". His presentation gave an overview of the OIML, an introduction to the OIML-CS and included detailed information on how manufacturers can benefit from the OIML-CS. Through the acceptance and utilisation of OIML Certificates and OIML type evaluation reports, manufacturers can benefit from:

- shorter time to market,
- easier access to the international market, and
- reduced effort to obtain national or regional type approvals.

Mr Dixon's presentation was followed by a presentation from Wei Ji of NMO, providing information on the implementation of the OIML-CS in the UK. This was followed by a presentation from Cai Changqing of the National Institute of Metrology, China on the implementation of the OIML-CS in China.

The presentations provided an excellent opportunity to promote the OIML-CS to manufacturers, and clearly identified the benefits that the OIML-CS provides in terms of reducing barriers to trade. The BIML would like to thank the CWIA for the opportunity to be represented at the exhibition and to promote the OIML-CS to manufacturers in China through the series of presentations. ■

Paul Dixon, BIML Assistant Director, gives his welcome address

Paul Dixon presenting the "Benefits of the OIML-CS to manufacturers"

OIML-CS EVENTS

OIML-APLMF Seminar on the OIML-CS

Hangzhou, P.R. China 15–17 July 2019

PAUL DIXON, BIML

Delegates at the Seminar

Introduction

The OIML and the Asia-Pacific Legal Metrology Forum (APLMF) held a seminar on the OIML Certification System (OIML-CS) in Hangzhou, P.R. China on 15-17 July 2019, attended by 140 delegates from 26 economies. Economies represented at the seminar were Bhutan, Brazil, China, Cambodia, Colombia, Germany, India, Indonesia, Japan, Kiribati, Lao DPR, Malaysia, Mongolia, Namibia, Netherlands, New Zealand, Nigeria, Papua New Guinea, Philippines, Sri Lanka, Sudan, Switzerland, Thailand, Vietnam and Zambia.

Aims

The seminar was primarily focused on providing participants with a detailed understanding of the OIML-CS and how it can support an economy to develop a national type approval system, without the need to invest in expensive test facilities. The aim of the seminar was to help improve and harmonise metrology capability and type approval controls in the Asia-Pacific region, and to facilitate trade development through the removal of technical barriers and the application of consistent regulatory practice.

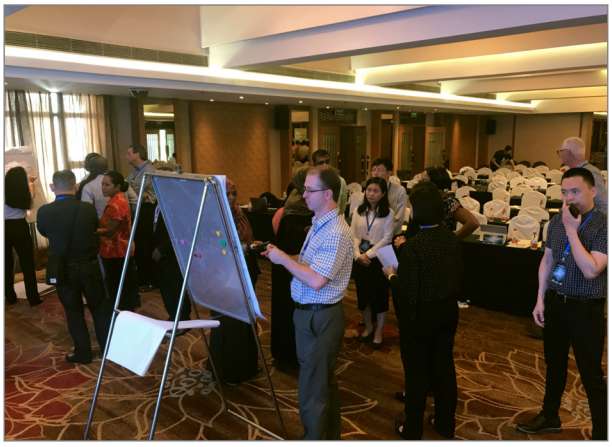
Presentations

Cock Oosterman (OIML-CS MC Chairperson), Paul Dixon (BIML Assistant Director and OIML-CS Executive Secretary), and Phil Sorrell (APLMF) led the seminar. After the welcoming addresses and opening of the seminar, delegates were provided with information on the role of the OIML and a detailed introduction to the OIML-CS.

This was followed by a series of presentations from Cock Oosterman (on behalf of the NMi OIML Issuing Authority), Jairo Malaver (Colombia, Utilizer), Ashutosh Agarwal (India, Utilizer), Peter Ulbig (Germany, OIML IA and Utilizer), Takeshi Ito (Japan, OIML IA and Utilizer), Himba Cheelo (Zambia, Utilizer), Karlheinz Banholzer (CECIP) and Phil Sorrell (New Zealand, Utilizer). The speakers each shared with the delegates their practical knowledge and experience of participating in the OIML-CS. Paul Dixon and Bobjoseph Mathew provided the delegates with information on the requirements and processes associated with participating in the OIML-CS.

Breakout sessions

In addition to the presentations from the speakers, delegates also participated in two breakout sessions. The first was aimed at identifying the existing type approval controls and the needs in each of the economies, and the



Delegates participated in two breakout sessions

second at identifying how each of the economies could utilise the OIML-CS. These sessions were very interactive, with delegates working in small groups and then presenting their findings to all of the participants in feedback sessions. Delegates each had the opportunity to share information on the type approval controls in their economies and to identify actions relating to how the OIML-CS could support them in developing and harmonising their metrological capability and controls.

Technical visits

As part of the program of activities, delegates also visited the metrology museum at the Jiliang University and Chint Group, a manufacturer of utility meters which has benefitted from OIML certification of their meters. The delegates were provided with a tour of the Chint Group facility in Hangzhou, followed by a presentation on the Chint Group activities and their use of OIML certification.

Summary

Participants' feedback and engagement at the seminar were very positive, and the exchange of information and the discussions between the delegates were very collaborative. The presentations addressed the relevant questions for the delegates, who were very involved in

Report on the OIML-APLMF Seminar by Phil Sorrell, APLMF Secretariat

It was the APLMF's pleasure to support the recent **OIML Certification System Seminar** jointly with the OIML, OIML Training Center, State Administration for Market Regulation (SAMR) (PR China), and the PTB through the MEDEA 2 project. The Seminar was held in Hangzhou, PR China from 15-17 July 2019.

There were 140 participants, predominately directors and senior representatives of the national metrology authority or the body responsible for the legal control of measuring instruments in each economy. APLMF full member delegates from Cambodia, Indonesia, Japan, Kiribati, Malaysia, Mongolia, Papua New Guinea, Philippines, Thailand and Vietnam, along with Corresponding Members Colombia and Lao PDR participated.

The primary focus of the seminar was to provide participants with a detailed understanding of the OIML Certification System (OIML-CS) and how it can support an economy to implement a new national type approval system, without the need to invest in expensive test facilities.

Mr Phil Sorrell represented the APLMF both as a speaker and to provide administrative support. He noted the Seminar was both informative and interactive with a good mix of speakers from the OIML, Industry and OIML Issuing Authorities and Utilizers. Mr Sorrell reported that the Seminar format with speakers and breakout groups worked well, with the numbers attending and feedback indicating a high level of engagement from participants.

The APLMF strongly supports the OIML-CS and held a session at the 25th APLMF Forum and Working Group Meetings in

Participants in the OIML-APLMF seminar on the OIML Certification System (OIML-CS)

the breakout sessions. Many of the economies which are not currently participating in the OIML-CS expressed interest in becoming Utilizers or Associates, thus immediately proving the benefits of organising such an event.

The OIML would like to thank the APLMF for coordinating the seminar, the State Administration for Market Regulation (SAMR) in P.R. China for hosting and supporting it, and the PTB, Germany for providing funding under the MEDEA Project.

For further information on the OIML-CS, please contact Paul Dixon, OIML-CS Executive Secretary (executive.secretary@oiml.org). ■

November 2018 to provide an overview of the OIML-CS, its governance structures and progress made to date. An OIML-CS Working Group, Chaired by Mrs Zheng Huaxin (PR China) and with members from Cambodia, Indonesia, Japan and Vietnam, was also set up to promote the use of OIML-CS and this Seminar was their first task. It is expected that they will participate in the development of an e-learning module over the next couple of years. We also aim to provide updates on the OIML-CS in our quarterly newsletters and appreciate input from Mr Bill Loizides (Australia) and Dr Chuck Ehrlich (USA) supported by Mr Paul Dixon (BIML). We are planning to hold a panel discussion on the OIML-CS at our 26th APLMF Forum and Working Group Meetings to continue the discussions and showcasing successes within our region.

Mr Sorrell strongly recommends developing case studies to provide information and encouragement to economies that are looking to adopt OIML-CS. He also thought it was important to provide guidance, coaching and technical expertise to assist economies through the political and legislative engagement needed with amending legislation to adopt the OIML-CS in their economies.

The APLMF acknowledges the commitment of all parties to making the OIML-CS Seminar an outstanding success and the first of many steps to support our members to adopting the System. ■

OIML-CS EVENTS

III International Congress on legal metrology

Bogota, Colombia 29–31 May 2019

IAN DUNMILL, BIML

The importance of metrological control and its effects on industry, commerce and consumers, was the central theme of the Third International Congress of Legal Metrology and OIML seminar organized by the Superintendence of Industry and Commerce (SIC), the Colombian national authority for legal metrology.

Superintendent Andrés Barreto González highlighted the fact that it had been seven years since Colombia had joined the OIML, and this has allowed the country to reach high standards in the quality control of measurement results. He also highlighted the impact of legal metrology on the daily lives of consumers, which is why the SIC monitors standards to protect transport, the environment, international trade, the use of infrastructure, the payment of taxes and other issues related to legality.

Recent figures for the SIC show that between 2018 and 2019, the Superintendence has verified more than 200 truck scales, 7 000 fuel pumps, and more than 10 000 scales used in commercial transactions. This control even reinforces the fight against smuggling in Colombia, since surveillance is carried out on scales used to weigh maritime containers entering the country.

Legal metrology benefits both consumers and companies, and proof of this is that the SIC has managed to solve its limitations in the regulation of scales, taximeters and alcohol sensors, under international standards, complying with all standards for technical regulation of Colombia. Proof of this is that the control of truck scales allowed the Superintendence of Transportation to impose fines of 11 billion pesos on truck drivers for excess cargo in 2018.

The group of international speakers who participated in the congress included Ian Dunmill, Assistant Director at the BIML, who shared the experience in different countries on the metrological control of truck scales including seaports in support of the SOLAS regulations on container weighing. Cock Oosterman, Chair of the Management Committee for the OIML Certification System (OIML-CS) explained the benefits of participation in this system. Argentina reported benefits for farmers of more than 100 million USD per year in their country, and Brazil reported that when combatting fuel dispenser fraud, organized crime is fought because this activity is associated with drug trafficking and money laundering.

Spain and South Africa described their efforts to efficiently control the problems of forged certificates and smuggling of equipment, thus ensuring compliance with requirements. Together with this experience, the creation of a certificate security seal was highlighted, which Argentina recently implemented.

Finally, Colombia presented the evolution of legal metrology in the country, highlighting the fact that from 2011 to 2014, the SIC became a significant presence in the national territory, including in those municipalities where control was sporadic because not all service stations were verified and shops were not visited. However, in 2015, the National Network for Consumer Protection (RNPC) was created to decentralize metrological control across the country and to exercise this surveillance with the support of mayors.

The Congress also included a workshop on the OIML Certification System (OIML-CS) entitled *Promoting Global Harmonization for Measuring Instruments*, which was conducted by Ian Dunmill and Cock Oosterman, who explained the structure and benefits of the OIML-CS and how to participate in it. There was a very high level of active participation from manufacturers and regulators and verification officers present. ■

Speakers at the Third International Congress of Legal Metrology and OIML seminar

SIC report on the first year of verification activities of the Authorized Organizations of Metrological Verification (OAVM)

The National Quality System in Colombia established metrological requirements for measuring instruments to ensure that measurements used daily by consumers are correct and that instruments involved in the measurement process are reliable.

In addition, the Superintendence of Industry and Commerce, Colombia, as the regulator of legal metrology, issued Resolution 77506 of 2016, modified by Resolution 67759 of 2019, establishing the metrological control of non-automatic weighing instruments. It also issued Resolution 77507 of 2016, modified by Resolution 67760 of 2018 establishing the metrological control of liquid fuel pumps, dispensers and meters.

The Metrological Technical Regulations (RTM), placed obligations on importers, producers and those responsible for each measuring instrument.The RTM describes the metrological verification procedures to be carried out by metrological control authorities in Colombia, including the SIC, the mayors' offices and the Authorized Metrological Verification Bodies – OAVM (in its Spanish acronym).

The Superintendence therefore appointed two OAVMs for this purpose: the Metrological Verification Consortium – CVM (in its Spanish acronym), which verifies commercial scales and liquid fuel pumps, and Metrolegal Colombia UT, which was designated for the verification of port truck scales and road construction. The figures in the table are available from the beginning of the verification activities carried out by the designated OAVMs until April 28, 2019.

The OAVMs have performed verifications in 325 municipalities of the national territory, in 26 of the 32 departments of the country. The OAVMS conducted 6 333 metrological verifications of the aforementioned measuring instruments. Of these, 8 % of the commercial scales, 43 % of the truck scales, and 11 % of the liquid fuel pumps did not meet the required parameters of the metrological verification.

The Superintendence of Industry and Commerce has also created an information system called the "Legal Metrology Information System" – SIMEL (in its Spanish acronym), which records all the activities carried out for each instrument, including verifications and their results, repairs, seals, and taxes, among others. Thus, there is complete control of each instrument, and at the same time, the OAVMs are monitored. In summary, it can be concluded that thanks to the daily activities performed by the Authorized Organisms of Metrological Verification, Colombian consumers can be sure that service stations are delivering the amount of fuel paid, that supermarkets and butchers are offering fair prices, and that national roads are protected by an effective weight control. ■

Instrument	Verification result		Total verifications
	Conforms	Does not conform	
Commercial scales	3 647	308	3 955
Truck scales	35	26	61
Liquid fuel pumps	2 051	266	2 317
Total	**5 733**	**600**	**6 333**

Verification data from the beginning of the verification activities carried out by the designated OAVMs until April 28, 2019

World Metrology Day 2019 in numbers

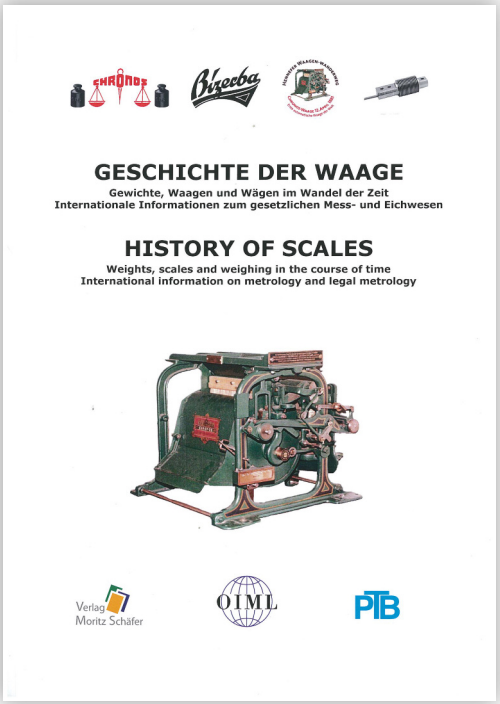
- 9 000 website visitors on 20 May 2019
- 19 200 website visitors in May 2019
- 84 Gb total bandwidth
- 32 Poster versions
- 43 International Events published

On behalf of the BIPM/OIML WMD Team, thank you for your support!

Now available ▶

The complete collection of the series of articles "History of scales: weights, scales and weighing in the course of time" which was published in cooperation with Wolfgang Euler in "Mühle + Mischfutter" and in the OIML Bulletin.

To order a copy (12 €), please contact Mr. Reinald Pottebaum r.pottebaum@vms-detmold.de



Foreword to the collection by Prof. Dr. Manfred Kochsiek

We have been accompanied by the specification of quantities as well as the determination of time and length since time immemorial. At the beginning, we more or less only estimated our measurements; after that, we progressed to comparisons with standard measures specified by a ruler of bygone times. The determination of quantities - and later of masses - has been proven by artefacts for more than 10 000 years.

This worked for centuries - a person interested in the quantity (mass) could directly follow the determination/ measurement. It was not until the last 70 years (from about 1950) that a change was made from weighing instruments with a standard comparison of mass using weights to load cells. Ever since such load cells have been invented and used, weights have been determined by means of force measurement as well as electronic components, e.g., analogue-digital converters and the corresponding obligatory operating software.

The equal-arm beam balance as an instrument for correct measurements has survived as a symbol of justice to the present day, e.g. in the judiciary. Just how mass determination is arrived at from force measurement in practice, is no longer known today by most people, including many experts.

In the course of the entire development from the beam balance to the most modern weighing systems, bygone rulers- and later governments- have enacted the respective laws and regulations in order to protect the weaker party from unfair mass determination and fraud.

The International Organization of Legal Metrology (OIML, currently with 128 members) has set itself the important task of attaining international harmonisation.

To portray the development of weighing techn9logy from its beginnings to what has been achieved until today is an important task deserving of thanks, and one that was assumed by the team of authors around Wolfgang Euler.

This development has been conveyed very clearly with practical examples in 20 individual articles published in the journals "OIML Bulletin" (in English) and "Mühle + Mischfutter" (in German).

The large amount of positive feedback received has led Verlag Moritz Schafer (the publisher of "Mühle + Mischfutter") to compile the individual articles into one volume. Wolfgang Euler was sadly not able to see this summary of his life's work. We are greatly indebted to him as well as to the OIML and to the Verlag Moritz Schafer in Detmold, Germany. ■

info

The OIML is pleased to welcome the following new

CIML Members

Belgium:
Mr. Dirk Bils

Romania:
Mr. Stancu Filip

Cambodia:
H.E. Mr. BY Pitou

OIML meetings

July 2019

OIML/APLMF Seminar on the OIML-CS

15–17 July 2019
Hangzhou, P.R. China

October 2019

54th CIML Meeting and Associated Events

21–25 October 2019
Bratislava, Slovak Republic

Bulletin online

Download the OIML Bulletin free of charge

www.oiml.org/en/publications/bulletin

Committee Drafts

Received by the BIML, 2019.05 – 2019.07

New Document: Pipe provers	1 CD	TC 8/p 8	JP
New Document: Petroleum measurement tables	1 CD	TC 8/p 7	JP
Revision of D 10: Guidelines for the determination of recalibration intervals of measuring equipment used in testing laboratories	1 CD	TC 4/p 9	SK

Call for papers

OIML Members
RLMOs
Liaison Institutions
Manufacturers' Associations
Consumers' & Users' Groups, etc.

- Technical articles on legal metrology related subjects
- Features on metrology in your country
- Accounts of Seminars, Meetings, Conferences
- Announcements of forthcoming events, etc.

The **OIML Bulletin** is a forum for the publication of technical papers and diverse articles addressing metrological advances in trade, health, the environment and safety - fields in which the credibility of measurement remains a challenging priority. The Editors of the Bulletin encourage the submission of articles covering topics such as national, regional and international activities in legal metrology and related fields, evaluation procedures, accreditation and certification, and measuring techniques and instrumentation. Authors are requested to submit:

- a titled, typed manuscript in Word or WordPerfect either on disk or (preferably) by e-mail;
- the paper originals of any relevant photos, illustrations, diagrams, etc.;
- a photograph of the author(s) suitable for publication together with full contact details: name, position, institution, address, telephone, fax and e-mail.

Note: Electronic images should be minimum 150 dpi, preferably 300 dpi.

Technical articles selected for publication will be remunerated at the rate of 23 € per printed page, provided that they have not already been published in other journals. The Editors reserve the right to edit contributions for style, space and linguistic reasons and author approval is always obtained prior to publication. The Editors decline responsibility for any claims made in articles, which are the sole responsibility of the authors concerned. Please send submissions to:

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